

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Original): A process for preparing a stable aqueous copolymer dispersion comprising free-radically initiated aqueous emulsion polymerization of

- a) from 19.9 to 80 parts by weight of conjugated aliphatic dienes,
- b) from 19.9 to 80 parts by weight of vinylaromatic compounds,
- c) from 0.1 to 10 parts by weight of ethylenically unsaturated carboxylic acids and/or dicarboxylic acids,
- d) from 0 to 20 parts by weight of ethylenically unsaturated carbonitriles,
- and
- e) from 0 to 20 parts by weight of copolymerizable compounds other than monomers b),

the total amount of ethylenically unsaturated monomers a) to e) being 100 parts by weight, in the presence of water and from 0.1 to 5 parts by weight, based on the total monomer amount, of emulsifiers comprising

- f) sulfuric monoesters of ethoxylated fatty acid alcohols and/or
- g) salts of esters and monoesters of alkylpolyoxyethylenesulfosuccinates,

from 15 to 85% by weight of the total emulsifiers used being added within the time taken to reach up to 40% of the total conversion of the monomers a) to e), and from 1 to 50% of the carboxylic acid groups deriving from the monomers c) being neutralized by addition of base, wherein the partial neutralization of the monomers c) takes place before the polymerization.

Claim 2 (Previously Presented): The process as claimed in claim 1, wherein components a) to g) are supplied to the polymerization reactor during the polymerization via a common supply line.

Claim 3 (Previously Presented): The process as claimed in claim 2, wherein components a) to g) and at least part of the water are mixed to an emulsion by a mixing means during their supply.

Claim 4 (Previously Presented): The process as claimed in claim 3, wherein said mixing means comprises at least one static mixer, one dynamic mixer and/or one mixing nozzle.

Claim 5 (Previously Presented): The process as claimed in claim 2, wherein at least part of the base required for partial neutralization of the monomers c) is metered into the common supply line.

Claim 6 (Previously Presented): The process as claimed in claim 5, wherein at least part of the base required for partial neutralization of the monomers c) is metered into the common supply line upstream of the mixing means.

Claim 7 (Previously Presented): The process as claimed in claim 1, wherein the free-radically initiated aqueous emulsion polymerization is conducted in the presence of a polymer seed.

Claim 8 (Currently Amended): The process as claimed in claim 7, wherein at least part of the water and, ~~if desired,~~ optionally parts of one or more of components a) to g) and also parts or all of a polymer seed or ~~of further,~~ other customary additives are charged to the polymerization reactor and the remainders of these components are supplied to the liquid phase of the reaction mixture after the free-radical polymerization has been initiated.

Claim 9 (New): A process for preparing a stable aqueous copolymer dispersion, comprising:

polymerizing, in a polymerization vessel, an aqueous monomer mixture by free radically initiated aqueous emulsion polymerization, wherein the aqueous monomer mixture comprises water and

- a) from 19.9 to 80 parts by weight of conjugated aliphatic diene monomer,
 - b) from 19.9 to 80 parts by weight of vinylaromatic compound monomer,
 - c) from 0.1 to 10 parts by weight of at least one of an ethylenically unsaturated carboxylic acid monomer and a dicarboxylic acid monomer,
 - d) from 0 to 20 parts by weight of ethylenically unsaturated carbonitrile monomer,
- and
- e) from 0 to 20 parts by weight of one or more copolymerizable compounds other than monomer b),

wherein the total amount of the ethylenically unsaturated monomers a)-e) is 100 parts by weight;

wherein the polymerizing is carried out in the presence of from 0.1 to 5 parts by weight of at least one emulsifier selected from the group consisting of

- f) a sulfuric monoester of an ethoxylated fatty acid alcohol, and
- g) a salt of an ester and a monoester of an alkylpolyoxyethylenesulfosuccinate;

wherein from 15 to 85% by weight of the total weight of the emulsifier is added to the polymerization vessel during the polymerizing and before more than 40% by weight of the total amount of the ethylenically unsaturated monomers a)-e) are polymerized; and

wherein, before the polymerizing, from 1 to 50% of the carboxylic acid groups of the monomer c) are neutralized by mixing with a base.

Claim 10 (New): The process as claimed in claim 9, wherein the monomer c) is neutralized with the base before the monomer c) is added to the aqueous monomer mixture.

Claim 11 (New): The process as claimed in claim 1, wherein the aqueous monomer mixture comprises styrene, acrylic acid, and butadiene.

Claim 12 (New): The process as claimed in claim 9, wherein the aqueous monomer mixture comprises styrene, acrylic acid, and butadiene.